Quality Control Tables in the RIM

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A Little History

- **The Corps is responsible for determining dredged material suitability for disposal in New England waters**
- **EPA reviews the determination**
- **The Corps and EPA make their decision based on the submitted analytical data**

A Little More History

- Applicants were not always submitting the quality control data for the analytical results
- Possible problems: dilutions, but no hits
- Sediments: clean or not clean?

Results

- **The Corps/EPA were unable to tell if the analytical methods were being followed consistently by all laboratories**
- **Decision on the dredged material suitability for open water disposal could have been made on data of unknown quality**

The New RIM and Quality Control

- **Sets consistent requirements for documenting the quality of the submitted data**
- **Clarifies the necessary Quality Control procedures**
- **States that incomplete data submittals will require resubmittals**

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Section 5.4 Sediments (Section 6.3 for Water)

- **Provides a list of QC Checks to be performed**
- **Physical Parameters (grain size, TOC, % moisture)**
  - **Sample Duplicate**
  - **Standard Reference Materials (for TOC)**

Chemical Analyses – Quality Control Checks (as appropriate)

- Initial Calibrations
- Performance Evaluation Samples
- Continuing Calibration Checks
- Standard Reference Materials/Laboratory Control Samples
- Method Blanks

Chemical Analyses – Quality Control Checks (as appropriate)

- Matrix Spikes/Matrix Spike Duplicates
- Analytical Replicates (i.e., Laboratory Duplicates)
- Surrogates (for extractables)
- Internal standards (for mass spectrometric methods)

Data Reporting

- All data must be submitted electronically and as hard copy (EDD discussion to follow)
- Data include the quality control results
- Also required are Quality Control Summary Tables (found in Appendix II)

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Quality Control Summary Tables

- **Why?**
  - **Verify that the laboratory has analyzed the samples correctly**
  - **Verify that the quality control samples have been analyzed and meet the acceptance criteria**
  - **Ensure that the laboratory identifies any deviations**

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Table II-1: Completeness Checklist

- **Used to help the applicant document that**
  - **the SAP was followed,**
  - **the data package is complete**
  - **the data, in general, met all the quality control requirements**
- **Reviewed by the Corps to make sure everything is submitted and problems are identified**

Table II-1: Completeness Checklist

This table includes questions on:

- **sampling locations**
- **preservation**
- **chemical analyses quality control**
- **toxicity tests, etc.**

More detail is provided on other tables

Table II-2: Quality Control Summary Tables

- Specific for each parameter and each matrix
- Lists
  - Quality Control Element,
  - General Acceptance Criteria,
  - Criteria Met column (Yes/No),
  - A place to document deviations
  - Whether the data must be submitted or retained at the lab

Some General Comments

- Excel and pdf versions of these tables are located on the Corps site
- It's fine to generate your own equivalent tables
- The QC acceptance criteria are general – the tables can (should) be modified to document your specific QC acceptance criteria

More Comments

- **Data kept at the lab needs to be available upon request**
  - **Initial calibration**
  - **Calibration verifications**
  - **Continuing calibrations**

More Comments

- **The other data needs to be provided to the Corps**
  - **QC results for method blanks, surrogates, matrix spikes/matrix spike duplicates, laboratory control samples, standard reference materials, laboratory duplicates, and internal standard areas (for mass spec methods)**

Results for New QC Requirements

- Consistent data reporting from all applicants
- Documented data quality
- Confidence in decisions on dredged material suitability for open water disposal